Complete Summary

GUIDELINE TITLE

American Society of Clinical Oncology guideline for antiemetics in oncology: update 2006.

BIBLIOGRAPHIC SOURCE(S)

Kris MG, Hesketh PJ, Somerfield MR, Feyer P, Clark-Snow R, Koeller JM, Morrow GR, Chinnery LW, Chesney MJ, Gralla RJ, Grunberg SM. American Society of Clinical Oncology guideline for antiemetics in oncology: update 2006. J Clin Oncol 2006 Jun 20;24(18):1-16. [110 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: American Society of Clinical Oncology. Recommendations for the use of antiemetics: Evidence-based, clinical practice guidelines. J Clin Oncol 1999 Sep;17(9):2971.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Nausea and vomiting associated with chemotherapy and radiotherapy for cancer

GUIDELINE CATEGORY

Management
Prevention

Risk Assessment
Treatment

CLINICAL SPECIALTY

Oncology
Pediatrics

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To update the 1999 American Society of Clinical Oncology guideline for antiemetics in oncology

TARGET POPULATION

Adult and pediatric patients with cancer receiving chemotherapy or radiation therapy

INTERVENTIONS AND PRACTICES CONSIDERED

1. Assessment of patient's risk for emesis
2. Antiemetic pharmacotherapy:
    - Agents with the highest therapeutic index:
        - Serotonin (5-hydroxytryptamine [5-HT_3]) receptor antagonists
        - Corticosteroids (dexamethasone and methylprednisolone) (Note: dexamethasone is the recommended agent)
        - Neurokinin-1 (NK_1) receptor antagonists (aprepitant)
    - Agents of lower therapeutic index (not recommended but reserved for patients with intolerance to 5-HT_3):
        - Dopamine antagonists (metoclopramide)
        - Butyrophenones, phenothiazines, and cannabinoids
    - Adjunctive drugs, including benzodiazepines (lorazepam , alprazolam) and antihistamines (diphenhydramine)
    - Combinations of antiemetics: serotonin antagonists with corticosteroids and aprepitant

MAJOR OUTCOMES CONSIDERED

- Control of emesis (vomiting), measured by counting the number of vomiting episodes
- Control of nausea (perception that emesis may occur), as judged by the patient

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Searches of Electronic Databases
Searches of Unpublished Data

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

For the 2006 update, a methodology similar to that applied in the original American Society of Clinical Oncology practice guideline for antiemetics was used. Pertinent information published from 1998 through February 2006 was reviewed. The MEDLINE database (National Library of Medicine, Bethesda, MD) was searched to identify relevant information from the published literature for this update. A series of searches was conducted using the medical subject headings or text words "vomiting," "nausea," "neoplasms," "cancer," "tumor," "tumor," and "malignant." These terms were combined with a range of medical subject headings and text words representing available antiemetics agents: "antiemetics," "5-HT3 antagonist," "serotonin antagonist," "dolasetron," "granisetron," "ondansetron," tropisetron," "dexamethasone," "methylprednisone," "metoclopramide," "prochlorperazine," "aprepitant," "palonosetron," "L-754030," "L-758298," "substance P," "MK-869," and "receptors, neurokinin-1." Finally, these searches were combined serially with medical subject headings or text words corresponding to each of the major topical sections of the guideline, including, for example, "child" or "pediatric," "refractory" or "control," "radiotherapy" or "irradiation," and "bone marrow transplantation" or "high-dose chemotherapy."

Search results were limited to human studies and English-language articles. The Cochrane Library was searched with the phrase "antiemetic." Directed searches based on the bibliographies of primary articles were also performed. Finally, Update Committee members contributed articles from their personal collections. Specific Antiemetic Update Committee members were assigned to review the collected materials corresponding to the major sections of the guideline document.

The Update Committee's literature review focused on published randomized, controlled trials and systematic reviews and meta-analyses of published phase II and phase III randomized, controlled trials. The electronic literature searches identified a systematic review on aprepitant, a systematic review and meta-analysis on the role of neurokinin-1(NK_1) receptor antagonists in the prevention of emesis and nausea due to high-dose chemotherapy with cisplatin, a meta-analysis of randomized trials assessing the efficacy of dexamethasone in controlling chemotherapy-induced nausea and vomiting, and three systematic reviews and meta-analyses of 5-hydroxytryptamine-3 (5-HT3) serotonin receptor antagonists. Prepublication copies of two additional systematic reviews were made available to the Update Committee by the Cancer Care Ontario Program in Evidence-Based Care and the Oregon Evidence-Based Practice Center, respectively.

The Update Committee also considered carefully the guidelines and consensus statements that emerged from the International Antiemetic Consensus Conference, hosted by the Multinational Association of Supportive Care in Cancer (MASCC; Perugia, Italy), in March 2004.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus (Committee)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

The American Society of Clinical Oncology (ASCO) Antiemetic Guideline Update Committee's literature review focused on published randomized, controlled trials and systematic reviews and meta-analyses of published phase II and phase III randomized, controlled trials. The Update Committee also considered carefully the guidelines and consensus statements that emerged from the International Antiemetic Consensus Conference. Wherever possible, the Committee used the consensus statements and guidelines from the Multinational Association of Supportive Care in Cancer process to supplement other resources and to assist them in the preparation of this update.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The entire Update Committee met once to discuss strategy and to assign roles for the update. A writing committee collated different sections of the update prepared by the Update Committee members and edited the manuscript.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

A final draft of the updated guideline was circulated to the full Update Committee for review and approval. The updated document was reviewed and approved by the American Society for Clinical Oncology (ASCO) Health Services Committee and by the ASCO Board of Directors.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Note from the National Guideline Clearinghouse and the American Society of Clinical Oncology: This guideline update presents the "current recommendation" for each of the topics considered in the original guideline: "no change" is indicated if a recommendation has not been revised after analysis of the literature search and Update Committee review.

Overview

The three-drug combination of a 5-hydroxytryptamine-3 ($5\text{-}HT_3$) serotonin receptor antagonist, dexamethasone, and aprepitant is recommended before chemotherapy of high emetic risk. For persons receiving chemotherapy of high emetic risk, there is no group of patients for whom agents of lower therapeutic index are appropriate first-choice antiemetics. These agents should be reserved for patients intolerant of or refractory to $5\text{-}HT_3$ serotonin receptor antagonists, neurokinin-1 receptor antagonists, and dexamethasone. The three-drug combination of a $5\text{-}HT_3$ receptor serotonin antagonist, dexamethasone, and aprepitant is recommended for patients receiving an anthracycline and cyclophosphamide. For patients receiving other chemotherapy of moderate emetic risk, the Update Committee continues to recommend the two-drug combination of a $5\text{-}HT_3$ receptor serotonin antagonist and dexamethasone. In all patients receiving cisplatin and all other agents of high emetic risk, the two-drug combination of dexamethasone and aprepitant is recommended for the prevention of delayed emesis. The Update Committee no longer recommends the combination of a $5\text{-}HT_3$ serotonin receptor antagonist and dexamethasone for the prevention of delayed emesis after chemotherapeutic agents of high emetic risk.

2006 Practice Recommendations

Emesis Caused by Intravenously Administered Antineoplastic Agents

Emesis, measured by counting the number of vomiting episodes after treatment, is the most important clinical trial end point for studies of antiemetic drugs. Studies have documented that the occurrence of complete response (no emetic episodes and no rescue medications administered after antineoplastic therapy) is a highly accurate and reliable measure. This outcome has also been demonstrated to correlate with the patients' perception of emesis. Nausea (the perception that emesis may occur) can be judged only by the patient. Although the incidence of nausea correlates with the incidence of vomiting, nausea generally occurs more

frequently than vomiting. The Update Committee recommends the use of complete response for the guideline development process. Recent trials of aprepitant and palonosetron in patients receiving therapies of high or moderate emetic risk have recorded the incidence of vomiting, use of rescue therapy, and nausea for 5 days after antineoplastic treatment. The Update Committee recommends that the assessment of vomiting (no emesis and no rescue administered) and nausea for the 5 days after treatment be standard primary end points for antiemetic clinical trials in oncology.

Summary of Recommendations for Antiemetics in Oncology: Antiemetic Agents

Recommendations	Category	Current Recommendations
5-HT_3 serotonin receptor antagonists	Agent equivalence	At equivalent doses for the prevention of acute emesis, 5-HT_3 serotonin, serotonin receptor antagonists have equivalent safety and efficacy and can be used interchangeably.
	Drug dosage	No change from the original guideline. Use only established doses.
	Drug schedule	No change from the original guideline. Single doses are preferred.
	Route of administration	No change from the original guideline. At biologically equivalent doses, oral formulations are equally effective and safe as intravenous antiemetics.
Corticosteroids	Agent equivalence and route of administration	No change from the original guideline. At equivalent doses, corticosteroids have equivalent safety and efficacy and can be used interchangeably. Dexamethasone is preferred because of its extensive clinical study and wide availability.
	Drug dose and schedule	Single doses of dexamethasone are recommended.
NK_1 receptor antagonist (aprepitant)	Drug dose and schedule	Only the established dose and schedule of aprepitant should be used.

Abbreviations: 5-HT_3, 5-hydroxytryptamine-3; NK_1, neurokinin 1.

Summary of Recommendations for Antiemetics in Oncology: Antiemetic Regimens

Recommendation Category	Current Recommendations
Specific emetic risk categories	High (>90%) emetic risk. The three-drug combination of a 5-HT_3 serotonin receptor antagonist, dexamethasone, and aprepitant is recommended before chemotherapy. In all patients receiving cisplatin and all other agents of high emetic risk, the two-drug combination of dexamethasone and aprepitant is recommended. The Update Committee no longer recommends the combination of a 5-HT_3 serotonin receptor antagonist and dexamethasone on days 2 and 3. Moderate (>30% to 90%) emetic risk. The three-drug combination of a 5-HT_3 receptor serotonin antagonist, dexamethasone, and aprepitant is recommended for patients receiving AC. For patients receiving chemotherapy of moderate emetic risk other than AC, the Update Committee recommends the two-drug combination of a 5-HT_3 receptor serotonin antagonist and dexamethasone. In patients receiving AC, aprepitant as a single agent is recommended on days 2 and 3. For all other chemotherapies of moderate emetic risk, single-agent dexamethasone or a 5-HT_3 serotonin receptor antagonist is suggested for the prevention of emesis on days 2 and 3. Low (10% to 30%) emetic risk. Dexamethasone 8 mg is suggested. No routine preventive use of antiemetics for delayed emesis is suggested. Minimal (<10%) emetic risk. No change from the original guideline. No antiemetic should be administered routinely before or after chemotherapy. Combination chemotherapy. No change from the original guideline. Patients should be administered antiemetics appropriate for the chemotherapeutic agent of greatest emetic risk. Multiple consecutive days of chemotherapy. No change from the original guideline. It is suggested that antiemetics appropriate for the risk class of the chemotherapy, as outlined above, be administered for each day of the chemotherapy and for 2 days after, if appropriate. Antiemetic agents: lower therapeutic index. For persons

Recommendation Category	Current Recommendations
	receiving chemotherapy of high emetic risk, there is no group of patients for whom agents of lower therapeutic index are appropriate first-choice antiemetics. These agents should be reserved for patients intolerant of or refractory to 5-HT_3 serotonin receptor antagonists, NK_1 receptor antagonists, and dexamethasone.
	Antiemetic agents: adjunctive drugs. Lorazepam and diphenhydramine are useful adjuncts to antiemetic drugs, but are not recommended as single agents.
	Antiemetic agents: combinations of antiemetics. It is recommended that 5-HT_3 serotonin receptor antagonists be administered with dexamethasone and aprepitant in patients receiving chemotherapy of high emetic risk and in patients receiving AC. A 5-HT_3 serotonin receptor antagonist combined with dexamethasone should be used in patients receiving agents of moderate emetic risk other than AC.

Abbreviations: 5-HT_3, 5-hydroxytryptamine-3; NK_1, neurokinin 1; AC, anthracycline and cyclophosphamide

Special Emetic Problems

Prevention of Anticipatory Emesis

Current recommendation. No change from original guideline. Use of the most active antiemetic regimens appropriate for the chemotherapy being administered to prevent acute or delayed emesis is suggested. Such regimens must be used with the initial chemotherapy, rather than after assessing the patient's emetic response with less effective treatment.

Treatment of Anticipatory Emesis

Current recommendation. No change from original guideline. If anticipatory emesis occurs, behavioral therapy with systematic desensitization is effective and is suggested.

Summary of Recommendations for Antiemetics in Oncology: Special Emetic Problems

Recommendation Category	Current Recommendations

Recommendation Category	Current Recommendations
Emesis in pediatric oncology patients	The combination of a 5-HT_3 antagonist plus a corticosteroid is suggested before chemotherapy in children receiving chemotherapy of high or moderate emetic risk. Due to variation of pharmacokinetic parameters in children, higher weight-based doses of 5-HT_3 antagonists than those used in adults may be required for antiemetic protection.
High-dose chemotherapy	No change from original guideline. A 5-HT_3 serotonin receptor antagonist antiemetic combined with dexamethesone is suggested. Aprepitant should be considered although evidence to support its use specifically in these patients is lacking.
Vomiting and nausea despite recommended prophylaxis	No change from original guideline. The Update Committee suggests that clinicians (1) conduct a careful re-evaluation of emetic risk, disease status, concurrent illnesses, and medications; (2) ascertain that the best regimen is being administered for the emetic risk; (3) consider adding lorazepam or alprazolam to the regimen; and (4) consider substituting a high-dose intravenous metoclopramide for the 5-HT_3 antagonist or adding a dopamine antagonist to the regimen.

Abbreviation: 5-HT_3, 5-hydroxytryptamine-3

Summary of Recommendations for Antiemetics in Oncology: Radiation-Induced Emesis

Recommendation Category	Current Recommendations
High risk: total-body irradiation	No change from original guideline. The Update Committee suggests giving a 5-HT_3 serotonin receptor antagonist with or without a corticosteroid before each fraction and for at least 24 hours after.
Moderate emetic risk: upper abdomen (intermediate risk) hemibody irradiation, upper abdomen, abdominal-pelvic, mantle, craniospinal irradiation, and cranial radiosurgery	The Update Committee recommends a 5-HT_3 serotonin receptor antagonist before each fraction.

Recommendation Category	Current Recommendations
Low emetic risk: lower thorax, cranium (radiosurgery), and craniospinal	No change from original guideline. The Update Committee recommends a 5-HT_3 serotonin receptor antagonist before each fraction.
Minimal emetic risk: radiation of breast, head and neck, cranium, and extremities	No change from original guideline. The Update Committee suggests that treatment be administered on an as-needed basis only. Dopamine or 5-HT_3 serotonin receptor antagonists are advised. Antiemetics should be continued prophylactically for each remaining radiation treatment day.

Abbreviation: 5-HT_3, 5-hydroxytryptamine-3

Drug Regimens for the Prevention of Chemotherapy-Induced Emesis by Emetic Risk Category (see Tables 8 and 9 in the original guideline document for doses, schedules, and routes of administration)

Emetic Risk Category (incidence of emesis without antiemetics)	Antiemetic Regimens and Schedules
High (>90%)	5-HT_3 serotonin receptor antagonist: day 1 Dexamethasone: days 1, 2, 3 Aprepitant: days 1, 2, 3
Moderate (30% to 90%)	5-HT_3 serotonin receptor antagonist: day 1 Dexamethasone: day 1 (Aprepitant: days 1, 2, 3)*
Low (10% to 30%)	Dexamethasone: day 1
Minimal (<10%)	Prescribe as needed (see text in the original guideline document for details of agent selection)

Abbreviation: 5-HT_3, 5-hydroxytryptamine-3

*For patients receiving a combination of an anthracycline and cyclophosphamide.

Drug Regimens for the Prevention of Emesis Selected by the Emetic Risk Category of the Radiation Administered

Radiation Emetic Risk	Irradiated Area	Recommendations
High (> 90%)	Total body	Prophylaxis with 5-HT_3 serotonin receptor antagonist +/- dexamethasone with each fraction and 24 hours after
Moderate (60% to 90%)	Upper abdomen	Prophylaxis with 5-HT_3 serotonin receptor antagonist
Low (30% to 60%)	Lower thorax, pelvis, cranium (radiosurgery), and craniospinal	Prophylaxis or rescue with 5-HT_3 serotonin receptor antagonist
Minimal (< 30%)	Head and neck, extremities, cranium, breast	Rescue with dopamine receptor antagonist or 5-HT_3 serotonin receptor antagonist

Abbreviation: 5-HT_3, 5-hydroxytryptamine-3

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence supporting the recommendations is not specifically stated.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate administration of antiemetics while considering patient's emetic risk categories and other characteristics.

POTENTIAL HARMS

Serotonin receptor antagonists (5-HT_3). These agents share similar adverse effect patterns, with mild headache, transient asymptomatic elevations in serum transaminase, and constipation reported.

Single-dose corticosteroids. Adverse effects of single dexamethasone doses are rare, although elevations of serum glucose levels, epigastric burning, and sleep disturbances occur.

Neurokinase 1 receptor antagonists: Concomitant administration of aprepitant with chemotherapy agents such as cyclophosphamide and docetaxel (which in part are cleared by CYP3A4) theoretically could decrease the clearance of these drugs, resulting in prolonged exposure and toxicity, or in the case of cyclophosphamide, decreased exposure to its active metabolite. There has been no evidence in patients with cancer receiving standard doses and schedules of aprepitant with chemotherapy that these theoretical issues have any clinical sequelae.

Metoclopramide and 5-HT3 Serotonin Receptor Antagonists. Several trials have reported efficacy for oral metoclopramide administered in combination with dexamethasone. This agent is generally well tolerated, with few acute dystonic reactions in adults. Akathisia (restlessness) may occur.

Subgroups Most Likely to be Harmed

Dopamine antagonists. Dopamine antagonists, especially when administered over several consecutive days, cause a high incidence of dystonic reactions and are not a good choice for general multiple-day use in the pediatric population.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- The American Society of Clinical Oncology (ASCO) considers adherence to these guidelines to be voluntary. The ultimate determination regarding their application is to be made by the physician in light of each patient's individual circumstances. In addition, these guidelines describe evaluations and administration of therapies in clinical practice; they cannot be assumed to apply to interventions performed in the context of clinical trials, given that such clinical studies are designed to test innovative management strategies in a disease for which better treatment is sorely needed. However, by reviewing and synthesizing the latest literature, this practice guideline serves to identify questions for further research and the settings in which investigational therapy should be considered.
- The risk of emesis with radiotherapy varies with the treatment administered. Only a minority of patients receives radiation therapy of high emetic risk, and, in that group of patients, the problem can be difficult to prevent or control. Controversy exists, caused by a lack of systematic study, concerning definitions of emetic risk groups. As with chemotherapy-induced emesis, it is the identification of these risk groups that indicates whether antiemetic therapy should be administered routinely on a preventative basis, or whether antiemetics should be reserved for treatment as needed by individual

patients. The radiation oncology literature indicates that treatment field is one of the major determinants of emetic risk. More difficult to define, but also important considerations for risk, are the dose of radiotherapy administered per fraction and the pattern of fractionation. Using available data and clinical experience, the Update Committee reached consensus on definitions of four radiotherapy-induced emesis risk groups (see Table 10 in the original guideline document). This represents a modification from the 1999 guideline.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Patient Resources
Slide Presentation

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

RELATED QUALITY TOOLS

- American Society of Clinical Oncology (ASCO) Patient Guide: Preventing Nausea and Vomiting Caused by Cancer Treatment

- Antiemetics in Oncology: Update 2006 American Society of Clinical Oncology Clinical Practice Guideline Slide Set

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Kris MG, Hesketh PJ, Somerfield MR, Feyer P, Clark-Snow R, Koeller JM, Morrow GR, Chinnery LW, Chesney MJ, Gralla RJ, Grunberg SM. American Society of Clinical Oncology guideline for antiemetics in oncology: update 2006. J Clin Oncol 2006 Jun 20;24(18):1-16. [110 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1999 Sep (revised 2006 Jun 20)

GUIDELINE DEVELOPER(S)

American Society of Clinical Oncology - Medical Specialty Society

SOURCE(S) OF FUNDING

American Society of Clinical Oncology

GUIDELINE COMMITTEE

2006 ASCO Antiemetic Guideline Update Expert Panel

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Panel Members: Mark G. Kris, MD (Chair); Richard J. Gralla, MD; Maurice J. Chesney; Lawrence W. Chinnery; Rebecca Clark-Snow, RN, BSN, OCN; Petra Feyer, MD; Steven M. Grunberg, MD; Paul J. Hesketh, MD; Jim M. Koeller, MS; Gary R. Morrow, PhD, MS

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Although all authors completed the disclosure declaration, the following authors or their immediate family members indicated a financial interest.

Authors	Employment	Leadership	Consultant	Stock	Honoraria	Research Funds	Testi
Mark G. Kris			Merck and Company (B); MGI Pharma (B); Sanofi-Aventis (B); GlaxoSmithKline (A)				Merc Com (N
Paul J. Hesketh			Merck (A); GlaxoSmithKline (A)		Merck (A); GlaxoSmithKline (A); MGI	Merck (B)	

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Dollar Amount Codes (A) < $10,000 (B) $10,000-99,999 (C) ≤$100,000 (N/R) Not Requ							

*These authors have no disclosures to report.

No conflict exists for drugs or devices used in a study if they are not being evaluated as part of the investigation. For a detailed description of the disclosure categories, or for more information about the American Society of Clinical Oncology's conflict of interest policy, please refer to the Author Disclosure Declaration and the Disclosures of Potential Conflicts of Interest section in Information for Contributors.

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: American Society of Clinical Oncology. Recommendations for the use of antiemetics: Evidence-based, clinical practice guidelines. J Clin Oncol 1999 Sep;17(9):2971.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the American Society of Clinical Oncology (ASCO) Web site.

Print copies: Available from American Society of Clinical Oncology, Cancer Policy and Clinical Affairs, 1900 Duke Street, Suite 200, Alexandria, VA 22314; E-mail: guidelines@asco.org.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- 2006 update of the ASCO guideline for antiemetics in oncology: recommendation changes. Alexandria (VA): American Society of Clinical Oncology; 2006. 2 p. Electronic copies: Available in Portable Document Format (PDF) from the American Society of Clinical Oncology (ASCO) Web site.
- Guideline for antiemetics in oncology: update 2006. American Society of Clinical Oncology guideline. Slide set. Alexandria (VA): American Society of Clinical Oncology; 2006. 33 p. Electronic copies: Available in Portable Document Format (PDF) from the ASCO Web site.

PATIENT RESOURCES

The following is available:

- ASCO patient guide: preventing nausea and vomiting caused by cancer treatment. 2006. Electronic copies available from the American Society of Clinical Oncology Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This summary was completed by ECRI on January 3, 2000. It was verified by the guideline developer on January 18, 2000. This NGC summary was updated by ECRI on July 25, 2006.

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